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THE COMBINED EFFECT OF AFFILIATION AND GROUP RESPONSIBILITY ON ETHICAL RISK TAKING IS EXAMINED. SUBJECTS WERE 150 MALE COLLEGE STUDENTS RANDOMLY ASSIGNED TO THREE LEVELS OF AFFILIATION. THE TASK CONSISTED OF TRACING A LINE BETWEEN TWO CONCENTRIC CIRCLES WITHOUT TOUCHING EITHER CIRCLE. SUBJECTS REPORTED THEIR OWN "SUCCESSES" ON THE TASK, WHICH WAS IMPOSSIBLE. GROUP RESPONSIBILITY WAS VARIED BY HAVING TWO PAYOFF TYPES. FOR LOW RESPONSIBILITY, THE SUBJECT WAS PAID ON THE BASIS OF HIS PERFORMANCE WHILE FOR HIGH RESPONSIBILITY, THE SUBJECT WAS PAID ON THE BASIS OF HIS GROUP'S PERFORMANCE. AFFILIATION WAS VARIED BY HAVING THE TASK PERFORMED IN THE PRESENCE OF OTHER GROUP MEMBERS OR IN ISOLATION. ETHICAL RISK TAKING WAS FOUND TO VARY DIRECTLY WITH AFFILIATION WHEN GROUP RESPONSIBILITY WAS PRESENT, AND INVERSELY WHEN IT WAS NOT PRESENT. GROUP RESPONSIBILITY ALONE DID NOT PRODUCE A SIGNIFICANT EFFECT. SHARING RESPONSIBILITY WITH KNOWN GROUP MEMBERS WHO ARE EXPECTED TO COLLABORATE YIELDS HIGH ETHICAL RISK TAKING. A ONE-YEAR FOLLOW-UP STUDY OF 52 SUBJECTS IS DISCUSSED. THIS PAPER WAS DELIVERED AT THE AMERICAN PSYCHOLOGICAL ASSOCIATION CONVENTION, WASHINGTON, D.C., SEPTEMBER, 1967. (SK)

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Group Responsibility, Affiliation, and Ethical Risk Taking*

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A most pervasive explanation of the consistently observed shift in risk taking found in groups, when compared to the performance of the same individuals alone, is that of responsibility diffusion. According to Wallach et al. (1964) two major components are involved in the diffusion process: 1. group responsibility, whereby the group as a whole tends to gain or lose as a function of the performance of each member, and 2. group decision making. Group decision making was originally produced by means of group discussion and consensus but was later shown to require only group discussion (Wallach & Kogan, 1965). While group responsibility as such produced a conservative effect (decreased risk taking), in combination with group discussion it increased risk taking beyond that observed by discussion alone. In these and other studies of group risk taking it has been generally assumed that group discussions tend to accentuate the social value of the risk (Brown, 1965).

Rettig (1966), in a study using monetarily rewarded unethical behavior, controlled the communications between group members so as to measure the effect of social comparisons on group risk taking. He showed that groups take greater ethical risks than individuals when the group members were separated from each other and did not communicate at all. Groups which did communicate about the risk did not differ from individuals. This finding illustrated that social comparisons decrease group risk taking when the risks are socially undesirable ones. However, in that study the factor of group responsibility was not varied. Hence, it is not clear whether the factor responsible for the high ethical risk taking in the non-communication groups was group membership per se, or whether such high risk

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taking also requires some expectancy of reciprocity (Gouldner, 1960) on the part of the group members. Since the behavior under study in unethical, the responsibility diffusion hypothesis would maintain that ethical risk taking is more likely to take place when the "successful" execution of the task demands that each group member be a participant and thus share both the outcome as well as the responsibility for the consequences. However, the above explanation hardly suffices for the individual to initiate such action. Since his risk taking is executed by himself, he must have some assurance that the other group members will act likewise; otherwise he will not only forfeit his payoff but will also leave himself exposed to censure. In other words, while desiring the payoff, the subject is not likely to engage in high risk taking unless he can expect the other group members to collaborate. The expectancy of reciprocity is more likely to arise when the payoff demands that every group member take a risk and when the other group members are known to the subject.

The purpose of the present experiment is to study the combined effect of affiliation and group responsibility on ethical risk taking. It is hypothesized that high affiliation (the physical presence of other group members) will produce high ethical risk taking when the outcome is shared by all. Similarly, sharing the outcome with group members who are known but who are not physically present (medium affiliation) should also produce a high level of risk taking. However, not sharing the payoff, or having to share the outcome with unknown members (low affiliation) should produce low risk taking. An additional aim of the present study is to determine if either group responsibility or affiliation by itself is sufficient to affect ethical risk taking in groups. If so, risk taking should vary directly with affiliation and inversely with group responsibility.

Method

Subjects

Ss were 150 male students solicited by means of a college newspaper advertisement which promised a minimum pay of $1.50 for a one hour experiment, with a maximum additional earning of $5.00. Ss were randomly assigned to three conditions of affiliation (high, medium, and low). Each condition was represented by two levels of group responsibility (presence versus absence). There were 14 degrees of freedom in each cell, representing either 15 individual Ss or 15 groups of three Ss.

Behavioral task

The task was described in an earlier report (Rettig, 1966). It consisted of tracing a line between two concentric circles, 1/16 inches apart, without touching either circle. The double circle, with a diameter of approximately $4\frac{1}{4}$ inch, was drawn on top of a $5\frac{1}{4}$ x $7\frac{1}{4}$ inch screen of an Etch-A-Sketch box, a toy permitting line tracings only by means of two control dials. One dial regulates only vertical movement, the other only horizontal movement. The line traced is easily erased by turning the box upside down and shaking it sideways. Following a warm-up period, each S received 5 trials within a half hour period during which to trace the line. Each S kept score of his own "successes". At the end of the experiment the scores were tallied up and the subjects received their payment. Since the task is not possible under the conditions specified, each reported success constitutes an ethical risk.

Some rationalization for the reporting of successful performance was provided by the fact that the distance between the traced line and the screen create a parallax effect in depth. By looking at the completed tracing from the side an illusion of accuracy can sometimes be obtained. While the use of

such an illegitimate procedure for the reporting of success does not change the ethically questionable nature of the report, it does eliminate emotional discomforts subsequent to such reporting. Hence, post experimental briefings could be confined largely to a basic explanation of the task, and to the request to keep silent about the experiment. Previous Kuder-Richardson estimates of reliability of the task were shown to be .7 irrespective of the condition of performance (i.e., group versus individual).

Group responsibility

Group responsibility was varied by having two types of payoff, each having a base rate of $1.00 per "success". In the low responsibility condition each subject was paid on the basis of his own performance only. In the high responsibility condition the subject's payoff was related to the performance of the other (real or fictitious) group members. The geometric mean was used to determine the payoff, as follows: $\sqrt[3]{ABC}$, where A, B, and C represent the "success" scores of the three group members. The cube root was used to insure that the payoff did not exceed a maximum of $5.00 for each subject. The multiplicative relationship was utilized because it put great responsibility on each member. Should any one group member report a complete lack of success, none would receive any monetary reward. Fictitious group members were arbitrarily assigned a single "success" score.

Affiliation

Three levels of affiliation are represented: high (the affiliate), medium (the associate), and low (the isolate). In the high level of affiliation each S (the affiliate) was a member of a 3-man group which performed in each others presence. Ss met each other in a lobby and were then taken together to

a small group dynamics laboratory where each S was seated in a partitioned section. Once seated, there was no visual or verbal communication among Ss during the experiment. The following instructions were given to each S in the high group responsibility condition:

General nature of the study: You are participating in a study of group performance of a difficult task involving visual-motor coordination. The three members of your group have been classified on the TJB Index (a bogus scale) of social standing which includes your personality and your values. The results of this index show that you and the other two persons do form a cohesive group.

You will each work on the task individually with no communications among yourselves. Each of you will be paid for participating in the experiment. You will also be paid for the success of the group as a whole. It is important to note that your performance (as well as the performance of the other members of the group) will directly affect the payoff.

Pay: Each subject in the group will be paid $1.50 for participating in the experiment. The bonus pay for successes is based on $1.00 per success. For group members, it is computed by a formula $\sqrt[3]{A \times B \times C}$, where A, B, C, are the number of successes scored by each member of the group. The successes for each member of the group are multiplied together; the cube root of the product is the bonus pay which each of you receives.

For example, if three group members score 1, 2 and 3 successes: 1 x 2 x 3 = 6, the cube root of 6 is 1.8, and each member is paid $1.80 in bonus pay. If a group scores 2, 3 and 4: 2 x 3 x 4 = 24, the cube root of 24 is 2.9, and each member receives $2.90 in bonus pay.

Any number multiplied by zero is zero; therefore, if any member of

the group has no successes, there will be no bonus for any member of the group. The maximum bonus pay which you can earn under the formula is $5.00.

The Task: The task is explained on the instruction sheet posted before you on the wall. (Here a standard explanation of the task was posted for all Ss participating in the study). After you have read this sheet and the instruction sheet, ask the experimenter any questions you may have, and then go ahead with the task.

The instruction in the low group responsibility condition were as follows:

General Nature of the Study: You are participating in a study of the performance of a difficult task involving visual-motor coordination. You and the other two subjects now taking the experiment have been classified on the basis of the TJB Index of social standing which includes your personality and your values. The results of this index show that the three of you do not form a cohesive group, since there is very little similarity among the three index scores.

You will work on the task individually with no communication with the others. You will be paid for your participation and also for the number of successes that you score. It is important to note that your performance will not affect anyone else's payoff, nor will their performance affect yours.

Pay: You will be paid $1.50 for participating in the experiment, plus $1.00 for each success which you score. Thus, $5.00 is the maximum bonus pay you can earn.

The Task: The task is explained on the instruction sheet posted before

you on the wall. After you have read this sheet and the instruction sheet, ask the experimenter any questions you may have, and then go ahead with the task.

In the low level of affiliation S (the isolate) performed in isolation, without meeting or knowing the other (fictitious) group members. The instructions for the isolate in the high group responsibility condition were as follows:

General nature of study: You are participating in a study of group performance of a difficult task involving visual-motor coordination. You have already completed the TJB Index, and your results and classification will be computed while you are doing the task. Two other subjects, who have already taken the experiment, will be selected to be closely matched with you to form a cohesive group. This is done on the basis of TJB classification and birth order.

Each member of the group will have worked on the task individually, with no chance to communicate with the other group members. Each of you will be paid for participating in the experiment. You will also be paid for the success of the group as a whole. It is important to note that your performance (as well as the performance of the other members of the group) will directly affect the payoff.

Pay: (Same as for high level of affiliation).

The instructions for the isolate in the low responsibility condition are as follows:

General nature of study: You are participating in a study of the

performance of a difficult task involving visual-motor coordination. You have already completed the TJB Index of social standing which includes your personality and your values. This information is obtained from all subjects participating in the experiment, and is used only for statistical purposes. None of this information will affect the pay you will receive for this experiment, nor are you in competition with any other subjects.

You will work on the task individually and will be paid for participation and also for the number of successes that you achieve. It is important to note that your performance will not affect anyone else's payoff, nor will their performance affect yours.

Pay: (Same as for high level of affiliation).

In the medium level of affiliation four Ss who were scheduled at the same time met in the lobby. Three Ss were taken together to the laboratory. The fourth S (the associate), who was randomly selected beforehand was taken by a different E to an adjacent room and was administered the task alone. The experimenters taking the group or the associate were systematically varied. The instructions given were identical with those given to the isolates.

The number of "successes" of S were expressed as a percentage of his total number of trials. This percentage was transformed using the arcsin $\sqrt{\text{percentage}}$ transformation, to reduce the skewness of the distribution of "successes" toward the zero point.

Results

Table 1 lists the mean transformed ethical risk scores of subjects for the three conditions of affiliation and the two levels of group responsibility.

Ethical risk taking varies directly with affiliation when group responsibility is present, and inversely when group responsibility is absent. Neither group responsibility not affiliation by itself produces a significant effect (Table 2). The interaction between both determinants attains statistical significance when the isolate is compared against the affiliate and associate combined ($p < .01$). The interaction does not attain statistical significance when the affiliate condition is contrasted with the associate condition.

Table 1 and 2 about here

DISCUSSION

The mere presence or absence of other group members engaging in the same task does not seem to influence group risk taking. The nearly identical incidence of total ethical risk taking, regardless of group or individual conditions, must be considered as striking, indeed. Similarly, sharing the outcome with others when engaging in socially undesirable behavior also does not appear by itself to have a significant influence on ethical risk taking.

However, the combination of both factors, group responsibility and affiliation, changes the picture radically. Sharing the responsibility with other group members who are known and who are expected to collaborate produces high ethical risk taking. The members do not have to communicate with each other, nor must they be physically present for the effect to take place. However, group members must be known to one another for the effect to occur. Sharing responsibility with unknown partners inhibits rather than facilitates ethical risk taking. These results support the assumption that the expectancy of reciprocity is a most critical determinant of ethical risk taking in groups. These findings are all the more amazing when one considers the fact that the participating subjects met each other for the first time during this one-hour experiment. Here it would seem that having to share the risk taking with one's cohort, even if only momentarily, in order to achieve personal gains may provide the impetus for reciprocity expectancies. The creation

of such expectancies apparently transcends the need for interpersonal communication and for close physical proximity, but not for familiarity.

However, the group conditions characterized by collective responsibility are not the only conditions producing high ethical risk taking. The isolate condition in which the individual is responsible only to himself also creates high ethical risk taking. Here the lack of the need for reciprocity, in addition to the absence of any social comparison, actual or anticipated, apparently tend to produce high ethical risk taking, provided the incentive is sufficiently high. These results may seem to contradict those obtained in an earlier study, in which an individual took less risk than the members of non-communicating groups (Rettig, 1966). However, in the previous study the individual was not completely isolated from others; hence the possibility for social comparisons was not entirely eliminated.

In conclusion, under certain conditions the group will engage in higher ethical risk taking than the individual, assuming the incentive to be sufficiently great for the behavior to take place at all. The group members must be familiar with one another and the action of all members must have a critical bearing on the goal attainment of any one member. One may refer to the former as affiliation and to the latter as group or collective responsibility. These two factors in combination seem to create norms of reciprocity which encourage the taking of ethical risks.

It is not unlikely that groups in real life situations characterized by conditions of high affiliation and collective responsibility may produce similar norms of reciprocity which permit the engagement in high ethical risk taking to achieve desired but scarce social or economic goals. These may include,for example, juvenile gangs competing for territorial rights, or a board of directors wishing to maximize corporate profits. Some goal directed social groups (or organizations) may provide a favorable structure for such solutions because they create personal ties of identification which allow such a process of "reciprocal facilitation."

While the sharing of responsibility with one's cohort may tend to ease purely personal feelings of responsibility and guilt for socially undesirable action, it also seems to provide greater reciprocal expectations (and better rationalizations) for the behavior to occur in the first place. Finally, it may also offer the opportunity to replace one goal (i.e. personal gain) by another (group membership) in case of failure.

Addendum

Approximately one year after the original experiment, a follow-up study was conducted to determine whether the task (the Etch-a-Sketch) actually measured ethical risk taking. Here it was conjectured that subjects who reported "successes" and were monetarily rewarded for it during the original study-in other words , the ethical risk takers- would be less willing to participate in the follow-up, despite the earlier reinforcement and the promise of additional pay. Of the original 156 subjects (including six subjects who were run but were randomly removed from the final analysis so as to equalize for the degrees of freedom in the various cells), one-third of the subjects (N=52) were still students at the university at the time of the follow-up. Here it must be taken into account that the original subjects were Summer students who had volunteered for the study. This included graduating seniors as well as temporary students. It cannot, of course, be assumed that this subsample of 52 students is representative of the total sample. However, the distribution of risk takers and non-risk takers within this subsample was nearly identical with that in the original study (Chi-square = .07, $p > .50$).

An attempt was made to contact each of these 52 subjects by phone to invite him to participate in the follow-up. Each subject was again promised a minimum pay of $1.50 for a 45-minute rerun of the original study, with the possibility of earning additional money, just as in the earlier experiment. However, no pressure was exerted to induce cooperation. The experimenter contacting and

interviewing the subject (if he showed up) did not know beforehand whether the subject was a risk taker or not. The actual follow-up consisted of the administration of a 10-item questionnaire pertaining to past and expected future performance on the task.

Of the 52 subjects, 31 actually showed up for the interview. The remaining 21 subjects either declined to participate, accepted but failed to show up, or did not reply to a message left for them to contact the experimenter. Of the subjects who did cooperate in the follow-up, 58 percent were risk takers and 42 percent were not. However, in the "no-show" group, 86 percent were risk takers compared to 14 percent non-risk takers, a ratio of better than 6 to 1 (Chi-square= 4.49, 1 df, $p < .05$). With one exception, the number of risk takers in the "no-show" group was 100 percent for each of the conditions of the experiment to which the subjects had originally been assigned. The only exception occurred in the high affiliation-low responsibility condition, where the number of risk takers equaled the number of non-risk takers. Despite the small number of subjects involved, these results support the assumption that the task did measure ethical risk taking.

Table 1 Mean Risk Taking per Subject (Arcsin $\sqrt{\%}$ Transform)
by Group Responsibility and Affiliation

	Affiliation		
Group Responsibility	Affiliate	Associate	Isolate
High	37.8	36.0	20.8
Low	24.9	26.0	41.8
Total	31.4	31.0	31.3

Table 2 Analysis of Variance of Ethical Risk Taking[1]

Source of Variation	df	MS	F
Group Responsibility (A)	1	1153	1.37
Affiliation	(2)		
Isolate vs Non-Isolate (B)	1	8	< 1
Affiliate vs Associate (C)	1	11	< 1
Interaction	(2)		
A x B	1	6613.5	7.86*
A x C	1	47.3	< 1
$Error_1$ (groups within cells)	28	1048.4	
$Error_2$ (Ss within cells, individual condition)	56	737.1	
Error (pooled)	84	840.9	

*$p < .01$

[1]Least-squares solution

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